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SEQUENCE LISTING

<110> Johns Hopkins University School of Medicine
Se-Jin, Lee
Alexandra, McPherron

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<140> US # UNASSIGNED

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<151> 1995-10-26

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<170> PatentIn version 3.0

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Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
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Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
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Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
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Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
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Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
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Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
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ctg caa atg tat gtt tat att tac ctg ttc atg ctg att gct gct ggc      163
Leu Gln Met Tyr Val Tyr Ile Tyr Leu Phe Met Leu Ile Ala Ala Gly
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cca gtg gat cta aat gag ggc agt gag aga gaa gaa aat gtg gaa aaa      211
Pro Val Asp Leu Asn Glu Gly Ser Glu Arg Glu Glu Asn Val Glu Lys
                               25                               30                               35

gag ggg ctg tgt aat gca tgt gcg tgg aga caa aac acg agg tac tcc      259
Glu Gly Leu Cys Asn Ala Cys Ala Trp Arg Gln Asn Thr Arg Tyr Ser
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aga ata gaa gcc ata aaa att caa atc ctc agt aag ctg cgc ctg gaa      307
Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu Arg Leu Glu
                               55                               60                               65

aca gct cct aac atc agc aaa gat gct ata aga caa ctt ctg cca aga      355
Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu Leu Pro Arg
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gcg cct cca ctc cgg gaa ctg atc gat cag tac gac gtc cag agg gat      403
Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val Gln Arg Asp
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gac agc agt gat ggc tct ttg gaa gat gac gat tat cac gct acc acg      451
Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His Ala Thr Thr
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gaa aca atc att acc atg cct aca gag tct gac ttt cta atg caa gcg      499
Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu Met Gln Ala
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Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu Arg Pro Val
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Val Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr
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 85 90 95
 gtc cag agg gat gac agc agt gac ggc tct ttg gaa gat gac gat tat 336
 Val Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr
 100 105 110
 cac gct acc acg gaa aca atc att acc atg cct acc gag tct gac ttt 384
 His Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe
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130	135	140	
tct aaa ata cag tac aac aaa gtg gta aag gcc cag ctg tgg ata tat			480
Ser Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr			
145	150	155	160
ctg aga gcc gtc aag act cct aca aca gtg ttt gtg caa atc ctg aga			528
Leu Arg Ala Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg			
	165	170	175
ctc atc aaa ccc atg aaa gac ggt aca agg tat acc gga atc cga tct			576
Leu Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser			
	180	185	190
ctg aaa ctt gac atg agc cca ggc act ggt att tgg cag agt att gat			624
Leu Lys Leu Asp Met Ser Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp			
	195	200	205
gtg aag aca gtg ttg caa aat tgg ctc aaa cag cct gaa tcc aac tta			672
Val Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu			
	210	215	220
ggc att gaa atc aaa gct ttg gat gag aat ggg cat gat ctt gct gta			720
Gly Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val			
	225	230	235
acc ttc cca gga cca gga gaa gat ggg ctg aat ccc ttt tta gaa gtc			768
Thr Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val			
	245	250	255
aaa gta aca gac aca ccc aag agg tcc cgg aga gac ttt ggg ctt gac			816
Lys Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp			
	260	265	270
tgc gat gaa cac tcc acg gaa tgc cgg tgc tgt cgc tac ccc ctc acg			864
Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr			
	275	280	285
gtc gat ttc gaa gcc ttt gga tgg gac tgg att att gca ccc aaa aga			912
Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg			
	290	295	300
tat aag gct aat tac tgc tct gga gag tgt gaa ttt gtg ttc tta caa			960
Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln			
	305	310	315
aaa tat ccg cat act cat ctt gtg cac caa gca aac ccc aga ggc tcg			1008
Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser			
	325	330	335
gca ggc cct tgc tgc acg cca aca aaa atg tct ccc att aat atg cta			1056
Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu			
	340	345	350
tat ttt aat ggc aaa gaa caa ata ata tat ggg aaa att cca gcc atg			1104
Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met			
	355	360	365
gta gta gac cgg tgt ggg tgc tgc tga			1131
Val Val Asp Arg Cys Gly Cys Ser			
	370	375	

<210> 6
 <211> 376
 <212> PRT
 <213> Rattus norvegicus

<400> 6

Met Ile Gln Lys Pro Gln Met Tyr Val Tyr Ile Tyr Leu Phe Val Leu
 1 5 10 15

Ile Ala Ala Gly Pro Val Asp Leu Asn Glu Asp Ser Glu Arg Glu Ala
 20 25 30

Asn Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Ala Trp Arg Gln Asn
 35 40 45

Thr Arg Tyr Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys
 50 55 60

Leu Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln
 65 70 75 80

Leu Leu Pro Arg Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp
 85 90 95

Val Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr
 100 105 110

His Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe
 115 120 125

Leu Met Gln Ala Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser
 130 135 140

Ser Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr
 145 150 155 160

Leu Arg Ala Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg
 165 170 175

Leu Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser
 180 185 190

Leu Lys Leu Asp Met Ser Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp
 195 200 205

Val Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu
210 215 220

Gly Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val
225 230 235 240

Thr Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val
245 250 255

Lys Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp
260 265 270

Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr
275 280 285

Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg
290 295 300

Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln
305 310 315 320

Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser
325 330 335

Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu
340 345 350

Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met
355 360 365

Val Val Asp Arg Cys Gly Cys Ser
370 375

<210> 7

<211> 1128

<212> DNA

<213> Gallus gallus

<220>

<221> CDS

<222> (1) .. (1125)

<400> 7

atg caa aag ctg gca gtc tat gtt tat att tac ctg ttc atg cag atc
Met Gln Lys Leu Ala Val Tyr Val Tyr Ile Tyr Leu Phe Met Gln Ile
1 5 10 15

48

gcg gtt gat ccg gtg gct ctg gat ggc agt agt cag ccc aca gag aac
Ala Val Asp Pro Val Ala Leu Asp Gly Ser Ser Gln Pro Thr Glu Asn
20 25 30

96

gct gaa aaa gac gga ctg tgc aat gct tgt acg tgg aga cag aat aca Ala Glu Lys Asp Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr																144
aaa tcc tcc aga ata gaa gcc ata aaa att caa atc ctc agc aaa ctg Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu																192
cgc ctg gaa caa gca cct aac att agc agg gac gtt att aag cag ctt Arg Leu Glu Gln Ala Pro Asn Ile Ser Arg Asp Val Ile Lys Gln Leu																240
tta ccc aaa gct cct cca ctg cag gaa ctg att gat cag tat gat gtc Leu Pro Lys Ala Pro Pro Leu Gln Glu Leu Ile Asp Gln Tyr Asp Val																288
cag agg gac gac agt agc gat ggc tct ttg gaa gac gat gac tat cat Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His																336
gcc aca acc gag acg att atc aca atg cct acg gag tct gat ttt ctt Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu																384
gta caa atg gag gga aaa cca aaa tgt tgc ttc ttt aag ttt agc tct Val Gln Met Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser																432
aaa ata caa tat aac aaa gta gta aag gca caa tta tgg ata tac ttg Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu																480
agg caa gtc caa aaa cct aca acg gtg ttt gtg cag atc ctg aga ctc Arg Gln Val Gln Lys Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu																528
att aag ccc atg aaa gac ggt aca aga tat act gga att cga tct ttg Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu																576
aaa ctt gac atg aac cca ggc act ggt atc tgg cag agt att gat gtg Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val																624
aag aca gtg ctg caa aat tgg ctc aaa cag cct gaa tcc aat tta ggc Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly																672
atc gaa ata aaa gct ttt gat gag act gga cga gat ctt gct gtc aca Ile Glu Ile Lys Ala Phe Asp Glu Thr Gly Arg Asp Leu Ala Val Thr																720
ttc cca gga cca gga gaa gat gga ttg aac cca ttt tta gag gtc aga Phe Pro Gly Pro Gly Glu Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Arg																768
gtt aca gac aca ccg aaa cgg tcc cgc aga gat ttt ggc ctt gac tgt Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys																816

gat gag cac tca acg gaa tcc cga tgt tgt cgc tac ccg ctg aca gtg 864
 Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
 275 280 285

gat ttc gaa gct ttt gga tgg gac tgg att ata gca cct aaa aga tac 912
 Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
 290 295 300

aaa gcc aat tac tgc tcc gga gaa tgc gaa ttt gtg ttt cta cag aaa 960
 Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
 305 310 315 320

tac ccg cac act cac ctg gta cac caa gca aat ccc aga ggc tca gca 1008
 Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
 325 330 335

ggc cct tgc tgc aca ccc acc aag atg tcc cct ata aac atg ctg tat 1056
 Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 340 345 350

ttc aat gga aaa gaa caa ata ata tat gga aag ata cca gcc atg gtt 1104
 Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
 355 360 365

gta gat cgt tgc ggg tgc tca tga 1128
 Val Asp Arg Cys Gly Cys Ser
 370 375

<210> 8

<211> 375

<212> PRT

<213> Gallus gallus

<400> 8

Met Gln Lys Leu Ala Val Tyr Val Tyr Ile Tyr Leu Phe Met Gln Ile
 1 5 10 15

Ala Val Asp Pro Val Ala Leu Asp Gly Ser Ser Gln Pro Thr Glu Asn
 20 25 30

Ala Glu Lys Asp Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
 35 40 45

Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
 50 55 60

Arg Leu Glu Gln Ala Pro Asn Ile Ser Arg Asp Val Ile Lys Gln Leu
 65 70 75 80

Leu Pro Lys Ala Pro Pro Leu Gln Glu Leu Ile Asp Gln Tyr Asp Val
 85 90 95

Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His

100

105

110

Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
115 120 125

Val Gln Met Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
130 135 140

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145 150 155 160

Arg Gln Val Gln Lys Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
165 170 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
180 185 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
195 200 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
210 215 220

Ile Glu Ile Lys Ala Phe Asp Glu Thr Gly Arg Asp Leu Ala Val Thr
225 230 235 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Arg
245 250 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
 355 360 365

Val Asp Arg Cys Gly Cys Ser
 370 375

<210> 9
 <211> 1128
 <212> DNA
 <213> Baboon

<220>
 <221> CDS
 <222> (1)..(1125)

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 Met Gln Lys Leu Gln Leu Cys Val Tyr Ile Tyr Leu Phe Met Leu Ile
 1 5 10 15
 gtt gct ggt cca gtg gat cta aat gag aac agt gag caa aaa gaa aat 96
 Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
 20 25 30
 gtg gaa aaa gag ggg ctg tgt aat gca tgt act tgg aga caa aac act 144
 Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
 35 40 45
 aaa tct tca aga ata gaa gcc att aaa ata caa atc ctc agt aaa ctt 192
 Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
 50 55 60
 cgt ctg gaa aca gct cct aac atc agc aaa gat gct ata aga caa ctt 240
 Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu
 65 70 75 80
 tta ccc aaa gcg cct cca ctc cgg gaa ctg att gat cag tat gat gtc 288
 Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
 85 90 95
 cag agg gat gac agc agc gat ggc tct ttg gaa gat gac gat tat cac 336
 Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
 100 105 110
 gct aca acg gaa aca atc att acc atg cct aca gag tct gat ttt tta 384
 Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
 115 120 125
 atg caa gtg gat gga aaa ccc aaa tgt tgc ttc ttt aaa ttt agc tct 432
 Met Gln Val Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
 130 135 140
 aaa ata caa tac aat aaa gtg gta aag gcc caa cta tgg ata tat ttg 480
 Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
 145 150 155 160
 aga ccc gtc gag act cct aca aca gtg ttt gtg caa atc ctg aga ctc 528

Arg	Pro	Val	Glu	Thr	Pro	Thr	Thr	Val	Phe	Val	Gln	Ile	Leu	Arg	Leu		
				165					170					175			
atc	aaa	cct	atg	aaa	gac	ggg	aca	agg	tat	act	gga	atc	cga	tct	ctg	576	
Ile	Lys	Pro	Met	Lys	Asp	Gly	Thr	Arg	Tyr	Thr	Gly	Ile	Arg	Ser	Leu		
			180					185					190				
aaa	ctt	gac	atg	aac	cca	ggc	act	ggg	att	tgg	cag	agc	att	gat	gtg	624	
Lys	Leu	Asp	Met	Asn	Pro	Gly	Thr	Gly	Ile	Trp	Gln	Ser	Ile	Asp	Val		
			195				200					205					
aag	aca	gtg	ttg	caa	aat	tgg	ctc	aaa	caa	cct	gaa	tcc	aac	tta	ggc	672	
Lys	Thr	Val	Leu	Gln	Asn	Trp	Leu	Lys	Gln	Pro	Glu	Ser	Asn	Leu	Gly		
	210					215					220						
att	gaa	ata	aaa	gct	tta	gat	gag	aat	ggg	cat	gat	ctt	gct	gta	acc	720	
Ile	Glu	Ile	Lys	Ala	Leu	Asp	Glu	Asn	Gly	His	Asp	Leu	Ala	Val	Thr		
	225				230				235					240			
ttc	cca	gga	cca	gga	gaa	gat	ggg	ctg	aat	ccc	ttt	tta	gag	gtc	aag	768	
Phe	Pro	Gly	Pro	Gly	Glu	Asp	Gly	Leu	Asn	Pro	Phe	Leu	Glu	Val	Lys		
				245				250					255				
gta	aca	gac	aca	ccc	aaa	aga	tcc	aga	agg	gat	ttt	ggg	ctt	gac	tgt	816	
Val	Thr	Asp	Thr	Pro	Lys	Arg	Ser	Arg	Arg	Asp	Phe	Gly	Leu	Asp	Cys		
			260				265					270					
gat	gag	cac	tca	aca	gaa	tcg	cga	tgc	tgt	cgt	tac	cct	cta	act	gtg	864	
Asp	Glu	His	Ser	Thr	Glu	Ser	Arg	Cys	Cys	Arg	Tyr	Pro	Leu	Thr	Val		
		275					280					285					
gat	ttt	gaa	gct	ctt	gga	tgg	gat	tgg	att	atc	gct	cct	aaa	aga	tat	912	
Asp	Phe	Glu	Ala	Leu	Gly	Trp	Asp	Trp	Ile	Ile	Ala	Pro	Lys	Arg	Tyr		
	290					295					300						
aag	gcc	aat	tac	tgc	tct	gga	gag	tgt	gaa	ttt	gta	ttt	tta	caa	aaa	960	
Lys	Ala	Asn	Tyr	Cys	Ser	Gly	Glu	Cys	Glu	Phe	Val	Phe	Leu	Gln	Lys		
	305				310				315						320		
tat	cct	cat	act	cat	ctg	gta	cac	caa	gca	aac	ccc	aga	ggg	tca	gca	1008	
Tyr	Pro	His	Thr	His	Leu	Val	His	Gln	Ala	Asn	Pro	Arg	Gly	Ser	Ala		
				325				330						335			
ggc	cct	tgc	tgt	act	ccc	aca	aag	atg	tct	cca	att	aat	atg	cta	tat	1056	
Gly	Pro	Cys	Cys	Thr	Pro	Thr	Lys	Met	Ser	Pro	Ile	Asn	Met	Leu	Tyr		
			340				345					350					
ttt	aat	ggc	aaa	gaa	caa	ata	ata	tat	ggg	aaa	att	cca	gcc	atg	gta	1104	
Phe	Asn	Gly	Lys	Glu	Gln	Ile	Ile	Tyr	Gly	Lys	Ile	Pro	Ala	Met	Val		
	355					360						365					
gta	gac	cgc	tgc	ggg	tgc	tca	tga									1128	
Val	Asp	Arg	Cys	Gly	Cys	Ser											
	370					375											

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 <211> 375
 <212> PRT
 <213> Baboon

<400> 10

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Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
 20 25 30

Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
 35 40 45

Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
 50 55 60

Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu
 65 70 75 80

Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
 85 90 95

Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
 100 105 110

Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
 115 120 125

Met Gln Val Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
 130 135 140

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
 145 150 155 160

Arg Pro Val Glu Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
 165 170 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
 180 185 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
 195 200 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
 210 215 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
 225 230 235 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
245 250 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Leu Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
355 360 365

Val Asp Arg Cys Gly Cys Ser
370 375

<210> 11
<211> 1128
<212> DNA
<213> Bovine

<220>
<221> CDS
<222> (1)..(1125)

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Met Gln Lys Leu Gln Ile Ser Val Tyr Ile Tyr Leu Phe Met Leu Ile
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gtt gct ggc cca gtg gat ctg aat gag aac agc gag cag aag gaa aat 96
Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
20 25 30

gtg gaa aaa gag ggg ctg tgt aat gca tgt ttg tgg agg gaa aac act 144
Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Leu Trp Arg Glu Asn Thr
35 40 45

aca tcg tca aga cta gaa gcc ata aaa atc caa atc ctc agt aaa ctt 192
Thr Ser Ser Arg Leu Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu

50				55				60								
cgc Arg 65	ctg Leu	gaa Glu	aca Thr	gct Ala	cct Pro 70	aac Asn	atc Ile	agc Ser	aaa Lys	gat Asp 75	gct Ala	atc Ile	aga Arg	caa Gln	ctt Leu 80	240
ttg Leu	ccc Pro	aag Lys	gct Ala	cct Pro 85	cca Pro	ctc Leu	ctg Leu	gaa Glu	ctg Leu 90	att Ile	gat Asp	cag Gln	ttc Phe	gat Asp 95	gtc Val	288
cag Gln	aga Arg	gat Asp	gcc Ala 100	agc Ser	agt Ser	gac Asp	ggc Gly	tcc Ser 105	ttg Leu	gaa Glu	gac Asp	gat Asp 110	gac Asp	tac Tyr	cac His	336
gcc Ala	agg Arg	acg Thr 115	gaa Glu	acg Thr	gtc Val	att Ile	acc Thr 120	atg Met	ccc Pro	acg Thr	gag Glu 125	tct Ser 125	gat Asp	ctt Leu	cta Leu	384
acg Thr 130	caa Gln	gtg Val	gaa Glu	gga Gly	aaa Lys 135	ccc Pro	aaa Lys	tgt Cys	tgc Cys	ttc Phe 140	ttt Phe	aaa Lys	ttt Phe	agc Ser	tct Ser	432
aag Lys 145	ata Ile	caa Gln	tac Tyr	aat Asn	aaa Lys 150	cta Leu	gta Val	aag Lys	gcc Ala 155	caa Gln 155	ctg Leu	tgg Trp	ata Ile	tat Tyr	ctg Leu 160	480
agg Arg	cct Pro	gtc Val	aag Lys 165	act Thr	cct Pro	gcg Ala	aca Thr	gtg Val 170	ttt Phe 170	gtg Val	caa Gln	atc Ile	ctg Leu	aga Arg 175	ctc Leu	528
atc Ile	aaa Lys	ccc Pro	atg Met 180	aaa Lys	gac Asp	ggc Gly	aca Thr	agg Arg 185	tat Tyr	act Thr	gga Gly	atc Ile	cga Arg 190	tct Ser	ctg Leu	576
aaa Lys	ctt Leu	gac Asp 195	atg Met	aac Asn	cca Pro	ggc Gly 200	act Thr	ggc Gly	att Ile	tgg Trp	cag Gln 205	agc Ser 205	att Ile	gat Asp	gtg Val	624
aag Lys 210	aca Thr	gtg Val	ttg Leu	cag Gln	aac Asn	tgg Trp 215	ctc Leu	aaa Lys	caa Gln	cct Pro 220	gaa Glu 220	tcc Ser	aac Asn	tta Leu	ggc Gly	672
att Ile 225	gaa Glu	atc Ile	aaa Lys	gct Ala	tta Leu 230	gat Asp	gag Glu	aat Asn	ggc Gly 235	cat His 235	gat Asp	ctt Leu	gct Ala	gta Val	acc Thr 240	720
ttc Phe	cca Pro	gaa Glu	cca Pro	gga Gly 245	gaa Glu	gat Asp	gga Gly	ctg Leu 250	act Thr 250	ccc Pro	ttt Phe	tta Leu	gaa Glu	gtc Val 255	aag Lys	768
gta Val	aca Thr	gac Asp 260	aca Thr	cca Pro	aaa Lys	aga Arg	tct Ser	agg Arg 265	aga Arg	gat Asp	ttt Phe	ggg Gly 270	ctt Leu	gat Asp	tgt Cys	816
gat Asp	gaa Glu	cac His 275	tcc Ser	aca Thr	gaa Glu	tct Ser	cga Arg 280	tgc Cys	tgt Cys	cgt Arg	tac Tyr	cct Pro 285	cta Leu	act Thr	gtg Val	864
gat Asp 290	ttt Phe	gaa Glu	gct Ala	ttt Phe	gga Gly 295	tgg Trp	gat Asp	tgg Trp	att Ile	att Ile 300	gca Ala	cct Pro	aaa Lys	aga Arg	tat Tyr	912

gta gat cgc tgt ggg tgt tca tga	1128
Val Asp Arg Cys Gly Cys Ser	
370 375	

<400> 12

Ala Arg Thr Glu Thr Val Ile Thr Met Pro Thr Glu Ser Asp Leu Leu
115 120 125

$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

Thr Gln Val Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
130 135 140

Lys Ile Gln Tyr Asn Lys Leu Val Lys Ala Gln Leu Trp Ile Tyr Leu
145 150 155 160

Arg Pro Val Lys Thr Pro Ala Thr Val Phe Val Gln Ile Leu Arg Leu
165 170 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
180 185 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
195 200 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
210 215 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225 230 235 240

Phe Pro Glu Pro Gly Glu Asp Gly Leu Thr Pro Phe Leu Glu Val Lys
245 250 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

Phe Asn Gly Glu Gly Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
355 360 365

Val Asp Arg Cys Gly Cys Ser

370

375

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gtt gct ggt ccc gtg gat ctg aat gag aac agc gag caa aag gaa aat 96
 Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
 20 25 30

gtg gaa aaa gag ggg ctg tgt aat gca tgt atg tgg aga caa aac act 144
 Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Met Trp Arg Gln Asn Thr
 35 40 45

aaa tct tca aga cta gaa gcc ata aaa att caa atc ctc agt aaa ctt 192
 Lys Ser Ser Arg Leu Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
 50 55 60

cgc ctg gaa aca gct cct aac att agc aaa gat gct ata aga caa ctt 240
 Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu
 65 70 75 80

ttg ccc aaa gct cct cca ctc cgg gaa ctg att gat cag tac gat gtc 288
 Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
 85 90 95

cag aga gat gac agc agt gat ggc tcc ttg gaa gat gat gat tat cac 336
 Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
 100 105 110

gct acg acg gaa acg atc att acc atg cct aca gag tct gat ctt cta 384
 Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Leu Leu
 115 120 125

atg caa gtg gaa gga aaa ccc aaa tgc tgc ttc ttt aaa ttt agc tct 432
 Met Gln Val Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
 130 135 140

aaa ata caa tac aat aaa gta gta aag gcc caa ctg tgg ata tat ctg 480
 Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
 145 150 155 160

aga ccc gtc aag act cct aca aca gtg ttt gtg caa atc ctg aga ctc 528
 Arg Pro Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
 165 170 175

atc aaa ccc atg aaa gac ggt aca agg tat act gga atc cga tct ctg 576
 Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
 180 185 190

aaa ctt gac atg aac cca ggc act ggt att tgg cag agc att gat gtg 624
 Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
 195 200 205

aag aca gtg ttg caa aat tgg ctc aaa caa cct gaa tcc aac tta ggc 672
 Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
 210 215 220

att gaa atc aaa gct tta gat gag aat ggt cat gat ctt gct gta acc 720
 Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
 225 230 235 240

ttc cca gga cca gga gaa gat ggg ctg aat ccc ttt tta gaa gtc aag 768
 Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
 245 250 255

gta aca gac aca cca aaa aga tcc agg aga gat ttt gga ctc gac tgt 816
 Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
 260 265 270

gat gag cac tca aca gaa tct cga tgc tgt cgt tac cct cta act gtg 864
 Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
 275 280 285

gat ttt gaa gct ttt gga tgg gac tgg att att gca ccc aaa aga tat 912
 Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
 290 295 300

aag gcc aat tac tgc tct gga gag tgt gaa ttt gta ttt tta caa aaa 960
 Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
 305 310 315 320

tac cct cac act cat ctt gtg cac caa gca aac ccc aga ggt tca gca 1008
 Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
 325 330 335

ggc ccc tgc tgt act ccc aca aag atg tct cca atc aat atg cta tat 1056
 Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 340 345 350

ttt aat ggc aaa gaa caa ata ata tat ggg aaa att cca gcc atg gta 1104
 Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
 355 360 365

gta gat cgc tgt ggg tgc tca tga 1128
 Val Asp Arg Cys Gly Cys Ser
 370 375

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 <211> 375
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20

25

30

Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Met Trp Arg Gln Asn Thr
35 40 45

Lys Ser Ser Arg Leu Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
50 55 60

Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu
65 70 75 80

Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
85 90 95

Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
100 105 110

Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Leu Leu
115 120 125

Met Gln Val Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
130 135 140

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145 150 155 160

Arg Pro Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
165 170 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
180 185 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
195 200 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
210 215 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225 230 235 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
245 250 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
355 360 365

Val Asp Arg Cys Gly Cys Ser
370 375

<210> 15
<211> 1128
<212> DNA
<213> Ovine

<220>
<221> CDS
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1 5 10 15

gtt gct ggc cca gtg gat ctg aat gag aac agc gag cag aag gaa aat 96
Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
20 25 30

gtg gaa aaa aag ggg ctg tgt aat gca tgc ttg tgg aga caa aac aat 144
Val Glu Lys Lys Gly Leu Cys Asn Ala Cys Leu Trp Arg Gln Asn Asn
35 40 45

aaa tcc tca aga cta gaa gcc ata aaa atc caa atc ctc agt aag ctt 192
Lys Ser Ser Arg Leu Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
50 55 60

cgc ctg gaa aca gct cct aac atc agc aaa gat gct ata aga caa ctt 240
Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu
65 70 75 80

ttg ccc aag gct cct cca ctc cgg gaa ctg att gat cag tac gat gtc 288

Leu	Pro	Lys	Ala	Pro	Pro	Leu	Arg	Glu	Leu	Ile	Asp	Gln	Tyr	Asp	Val	
				85					90					95		
cag	aga	gat	gac	agc	agc	gac	ggc	tcc	ttg	gaa	gac	gat	gac	tac	cac	336
Gln	Arg	Asp	Asp	Ser	Ser	Asp	Gly	Ser	Leu	Glu	Asp	Asp	Asp	Tyr	His	
			100					105					110			
gtt	acg	acg	gaa	acg	gtc	att	acc	atg	ccc	acg	gag	tct	gat	ctt	cta	384
Val	Thr	Thr	Glu	Thr	Val	Ile	Thr	Met	Pro	Thr	Glu	Ser	Asp	Leu	Leu	
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gca	gaa	gtg	caa	gaa	aaa	ccc	aaa	tgt	tgc	ttc	ttt	aaa	ttt	agc	tct	432
Ala	Glu	Val	Gln	Glu	Lys	Pro	Lys	Cys	Cys	Phe	Phe	Lys	Phe	Ser	Ser	
			130			135					140					
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Lys	Ile	Gln	His	Asn	Lys	Val	Val	Lys	Ala	Gln	Leu	Trp	Ile	Tyr	Leu	
					150						155				160	
aga	cct	gtc	aag	act	cct	aca	aca	gtg	ttt	gtg	caa	atc	ctg	aga	ctc	528
Arg	Pro	Val	Lys	Thr	Pro	Thr	Thr	Val	Phe	Val	Gln	Ile	Leu	Arg	Leu	
				165					170					175		
atc	aaa	ccc	atg	aaa	gac	ggc	aca	agg	tat	act	gga	atc	cga	tct	ctg	576
Ile	Lys	Pro	Met	Lys	Asp	Gly	Thr	Arg	Tyr	Thr	Gly	Ile	Arg	Ser	Leu	
			180					185					190			
aaa	ctt	gac	atg	aac	cca	ggc	act	ggc	att	tgg	cag	agc	att	gat	gtg	624
Lys	Leu	Asp	Met	Asn	Pro	Gly	Thr	Gly	Ile	Trp	Gln	Ser	Ile	Asp	Val	
			195			200						205				
aag	aca	gtg	ttg	caa	aac	tgg	ctc	aaa	caa	cct	gaa	tcc	aac	tta	ggc	672
Lys	Thr	Val	Leu	Gln	Asn	Trp	Leu	Lys	Gln	Pro	Glu	Ser	Asn	Leu	Gly	
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att	gaa	atc	aaa	gct	tta	gat	gag	aat	ggc	cat	gat	ctt	gct	gta	acc	720
Ile	Glu	Ile	Lys	Ala	Leu	Asp	Glu	Asn	Gly	His	Asp	Leu	Ala	Val	Thr	
					230					235				240		
ttc	cca	gaa	cca	gga	gaa	gaa	gga	ctg	aat	cct	ttt	tta	gaa	gtc	aag	768
Phe	Pro	Glu	Pro	Gly	Glu	Glu	Gly	Leu	Asn	Pro	Phe	Leu	Glu	Val	Lys	
				245					250					255		
gta	aca	gac	aca	cca	aaa	aga	tct	agg	aga	gat	ttt	ggg	ctt	gat	tgt	816
Val	Thr	Asp	Thr	Pro	Lys	Arg	Ser	Arg	Arg	Asp	Phe	Gly	Leu	Asp	Cys	
			260					265				270				
gat	gag	cac	tcc	aca	gaa	tct	cga	tgc	tgt	cgt	tac	cct	cta	act	gtg	864
Asp	Glu	His	Ser	Thr	Glu	Ser	Arg	Cys	Cys	Arg	Tyr	Pro	Leu	Thr	Val	
			275				280					285				
gat	ttt	gaa	gct	ttt	gga	tgg	gat	tgg	att	att	gca	cct	aaa	aga	tat	912
Asp	Phe	Glu	Ala	Phe	Gly	Trp	Asp	Trp	Ile	Ile	Ala	Pro	Lys	Arg	Tyr	

325

330

335

ggc cct tgc tgt act cct aca aag atg tct cca att aat atg cta tat 1056
 Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 340 345 350

ttt aat ggc aaa gaa caa ata ata tat ggg aag att cca ggc atg gta 1104
 Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val
 355 360 365

gta gat cgc tgt ggg tgc tca tga 1128
 Val Asp Arg Cys Gly Cys Ser
 370 375

<210> 16
 <211> 375
 <212> PRT
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<400> 16

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Val Glu Lys Lys Gly Leu Cys Asn Ala Cys Leu Trp Arg Gln Asn Asn
 35 40 45

Lys Ser Ser Arg Leu Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
 50 55 60

Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln Leu
 65 70 75 80

Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
 85 90 95

Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
 100 105 110

Val Thr Thr Glu Thr Val Ile Thr Met Pro Thr Glu Ser Asp Leu Leu
 115 120 125

Ala Glu Val Gln Glu Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
 130 135 140

Lys Ile Gln His Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
 145 150 155 160

Arg Pro Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
165 170 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
180 185 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
195 200 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
210 215 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225 230 235 240

Phe Pro Glu Pro Gly Glu Glu Gly Leu Asn Pro Phe Leu Glu Val Lys
245 250 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
290 295 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Leu Phe Leu Gln Lys
305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Lys Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

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355 360 365

Val Asp Arg Cys Gly Cys Ser
370 375

<210> 17

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<213> Meleagris gallopavo

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Leu Val His Pro Val Ala Leu Asp Gly Ser Ser Gln Pro Thr Glu Asn	
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gct gaa aaa gac gga ctg tgc aat gct tgc acg tgg aga cag aat act	144
Ala Glu Lys Asp Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr	
35 40 45	
aaa tcc tcc aga ata gaa gcc ata aaa att caa atc ctc agc aaa ctg	192
Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu	
50 55 60	
cgc ctg gaa caa gca cct aac att agc agg gac gtt att aaa caa ctt	240
Arg Leu Glu Gln Ala Pro Asn Ile Ser Arg Asp Val Ile Lys Gln Leu	
65 70 75 80	
tta ccc aaa gct cct ccg ctg cag gaa ctg att gat cag tat gac gtc	288
Leu Pro Lys Ala Pro Pro Leu Gln Glu Leu Ile Asp Gln Tyr Asp Val	
85 90 95	
cag aga gac gac agt agc gat ggc tct ttg gaa gac gat gac tat cat	336
Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His	
100 105 110	
gcc aca acc gaa acg att atc aca atg cct acg gag tct gat ttt ctt	384
Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu	
115 120 125	
gta caa atg gag gga aaa cca aaa tgt tgc ttc ttt aag ttt agc tct	432
Val Gln Met Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser	
130 135 140	
aaa ata caa tat aac aaa gta gta aag gca caa tta tgg ata tac ttg	480
Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu	
145 150 155 160	
agg caa gtc caa aaa cct aca acg gtg ttt gtg cag atc ctg aga ctc	528
Arg Gln Val Gln Lys Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu	
165 170 175	
att aaa ccc atg aaa gac ggt aca aga tat act gga att cga tct ttg	576
Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu	
180 185 190	
aaa ctt gac atg aac cca ggc act ggt atc tgg cag agt att gat gtg	624
Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val	
195 200 205	
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Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly	
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 Ile Glu Ile Lys Ala Phe Asp Glu Asn Gly Arg Asp Leu Ala Val Thr
 225 230 235 240

ttc cca gga cca ggt gaa gat gga ctg aac cca ttt tta gag gtc aga 768
 Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Arg
 245 250 255

gtt aca gac aca cca aaa cgg tcc cgc aga gat ttt ggc ctt gac tgc 816
 Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
 260 265 270

gac gag cac tca acg gaa tct cga tgt tgt cgc tac ccg ctg aca gtg 864
 Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
 275 280 285

gat ttt gaa gct ttt gga tgg gac tgg att ata gca cct aaa aga tac 912
 Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
 290 295 300

aaa gcc aat tac tgc tct gga gaa tgt gaa ttc gta ttt cta cag aaa 960
 Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
 305 310 315 320

tac ccg cac act cac ctg gta cac caa gca aat cca aga ggc tca gca 1008
 Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
 325 330 335

ggc cct tgc tgc aca ccc acc aag atg tcc cct ata aac atg ctg tat 1056
 Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 340 345 350

ttc aat gga aaa gaa caa ata ata tat gga aag ata cca gcc atg gtt 1104
 Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
 355 360 365

gta gat cgt tgc ggg tgc tca tga 1128
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 370 375

<210> 18

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<212> PRT

<213> Meleagris gallopavo

<400> 18

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 20 25 30

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 35 40 45

Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
50 55 60

Arg Leu Glu Gln Ala Pro Asn Ile Ser Arg Asp Val Ile Lys Gln Leu
65 70 75 80

Leu Pro Lys Ala Pro Pro Leu Gln Glu Leu Ile Asp Gln Tyr Asp Val
85 90 95

Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
100 105 110

Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
115 120 125

Val Gln Met Glu Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
130 135 140

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145 150 155 160

Arg Gln Val Gln Lys Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
165 170 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
180 185 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
195 200 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
210 215 220

Ile Glu Ile Lys Ala Phe Asp Glu Asn Gly Arg Asp Leu Ala Val Thr
225 230 235 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Arg
245 250 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
260 265 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
275 280 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr

290

295

300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

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355 360 365

Val Asp Arg Cys Gly Cys Ser
370 375

<210> 19
<211> 1125
<212> DNA
<213> Danio rerio

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<222> (1)..(1122)

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ggt cca gtg ggt tat gga gat ata acg gcg cac cag cag cct tcc aca 96
Gly Pro Val Gly Tyr Gly Asp Ile Thr Ala His Gln Gln Pro Ser Thr
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gcc acg gag gaa agc gag ctg tgt tcc aca tgt gag ttc aga caa cac 144
Ala Thr Glu Glu Ser Glu Leu Cys Ser Thr Cys Glu Phe Arg Gln His
35 40 45

agc aag ctg atg aga ctg cat gcc atc aag tcc caa att ctt agc aaa 192
Ser Lys Leu Met Arg Leu His Ala Ile Lys Ser Gln Ile Leu Ser Lys
50 55 60

ctc cga ctc aag cag gct cca aac atc agc cgg gac gtg gtc aag cag 240
Leu Arg Leu Lys Gln Ala Pro Asn Ile Ser Arg Asp Val Val Lys Gln
65 70 75 80

ctg tta ccc aaa gca ccg cct ttg caa caa ctt ctg gat cag tac gat 288
Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln Leu Leu Asp Gln Tyr Asp
85 90 95

gtt tta gga gat gac agt aag gat gga gct gtg gaa gag gac gat gaa 336
Val Leu Gly Asp Asp Ser Lys Asp Gly Ala Val Glu Glu Asp Asp Glu
100 105 110

GenBank accession number: U00187.1 (Danio rerio genome)

cat	gcc	acc	aca	gag	acc	atc	atg	acc	atg	gcc	aca	gaa	cct	gac	ccc	384
His	Ala	Thr	Thr	Glu	Thr	Ile	Met	Thr	Met	Ala	Thr	Glu	Pro	Asp	Pro	
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Ile	Val	Gln	Val	Asp	Arg	Lys	Pro	Lys	Cys	Cys	Phe	Phe	Ser	Phe	Ser	
	130					135					140					
ccg	aag	atc	caa	gcg	aac	cgg	atc	gta	aga	gcg	cag	ctc	tgg	gtt	cat	480
Pro	Lys	Ile	Gln	Ala	Asn	Arg	Ile	Val	Arg	Ala	Gln	Leu	Trp	Val	His	
	145				150					155					160	
ctg	aga	ccg	gcg	gag	gag	gcg	acc	acc	gtc	ttc	tta	cag	ata	tct	cgg	528
Leu	Arg	Pro	Ala	Glu	Glu	Ala	Thr	Thr	Val	Phe	Leu	Gln	Ile	Ser	Arg	
				165					170					175		
ctg	atg	ccc	gtt	aag	gac	gga	gga	aga	cac	cga	ata	cga	tcc	ctg	aaa	576
Leu	Met	Pro	Val	Lys	Asp	Gly	Gly	Arg	His	Arg	Ile	Arg	Ser	Leu	Lys	
			180					185					190			
atc	gac	gtg	aac	gca	gga	gtc	acg	tct	tgg	cag	agt	ata	gac	gta	aag	624
Ile	Asp	Val	Asn	Ala	Gly	Val	Thr	Ser	Trp	Gln	Ser	Ile	Asp	Val	Lys	
	195						200					205				
cag	gtg	ctc	acg	gtg	tgg	tta	aaa	caa	ccg	gag	acc	aac	cga	ggc	atc	672
Gln	Val	Leu	Thr	Val	Trp	Leu	Lys	Gln	Pro	Glu	Thr	Asn	Arg	Gly	Ile	
	210					215					220					
gag	att	aac	gca	tat	gac	gcg	aag	gga	aac	gac	ttg	gcc	gtc	act	tca	720
Glu	Ile	Asn	Ala	Tyr	Asp	Ala	Lys	Gly	Asn	Asp	Leu	Ala	Val	Thr	Ser	
	225				230				235						240	
acc	gag	act	ggg	gag	gat	gga	ctg	ctc	ccc	ttt	atg	gag	gtg	aaa	ata	768
Thr	Glu	Thr	Gly	Glu	Asp	Gly	Leu	Leu	Pro	Phe	Met	Glu	Val	Lys	Ile	
				245					250					255		
tca	gag	ggc	cca	aaa	cga	atc	cgg	agg	gac	tcc	gga	ctg	gac	tgc	gat	816
Ser	Glu	Gly	Pro	Lys	Arg	Ile	Arg	Arg	Asp	Ser	Gly	Leu	Asp	Cys	Asp	
			260					265					270			
gag	aat	tcc	tca	gag	tct	cgc	tgc	tgc	agg	tac	cct	ctc	act	gtg	gac	864
Glu	Asn	Ser	Ser	Glu	Ser	Arg	Cys	Cys	Arg	Tyr	Pro	Leu	Thr	Val	Asp	
		275					280					285				
ttc	gag	gac	ttt	ggc	tgg	gac	tgg	att	att	gct	cca	aaa	cgc	tat	aag	912
Phe	Glu	Asp	Phe	Gly	Trp	Asp	Trp	Ile	Ile	Ala	Pro	Lys	Arg	Tyr	Lys	
	290					295					300					
gcg	aat	tac	tgt	tca	gga	gaa	tgc	gac	tac	atg	tac	ctg	cag	aag	tat	960
Ala	Asn	Tyr	Cys	Ser	Gly	Glu	Cys	Asp	Tyr	Met	Tyr	Leu	Gln	Lys	Tyr	
	305				310				315						320	
ccc	cac	acc	cat	ctg	gtg	aac	aag	gcc	agt	ccg	aga	gga	acg	gct	ggg	1008
Pro	His	Thr	His	Leu	Val	Asn	Lys	Ala	Ser	Pro	Arg	Gly	Thr	Ala	Gly	
				325					330					335		
ccc	tgc	tgc	act	ccc	acc	aag	atg	tct	ccc	atc	aac	atg	ctt	tac	ttt	1056
Pro	Cys	Cys	Thr	Pro	Thr	Lys	Met	Ser	Pro	Ile	Asn	Met	Leu	Tyr	Phe	
			340					345					350			
aac	ggc	aaa	gag	cag	atc	atc	tac	ggc	aag	atc	cct	tcg	atg	gta	gta	1104

Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ser Met Val Val
 355 360 365

gac cgc tgt ggc tgc tca tga
 Asp Arg Cys Gly Cys Ser
 370

1125

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 <211> 374
 <212> PRT
 <213> Danio rerio

<400> 20

Met His Phe Thr Gln Val Leu Ile Ser Leu Ser Val Leu Ile Ala Cys
 1 5 10 15

Gly Pro Val Gly Tyr Gly Asp Ile Thr Ala His Gln Gln Pro Ser Thr
 20 25 30

Ala Thr Glu Glu Ser Glu Leu Cys Ser Thr Cys Glu Phe Arg Gln His
 35 40 45

Ser Lys Leu Met Arg Leu His Ala Ile Lys Ser Gln Ile Leu Ser Lys
 50 55 60

Leu Arg Leu Lys Gln Ala Pro Asn Ile Ser Arg Asp Val Val Lys Gln
 65 70 75 80

Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln Leu Leu Asp Gln Tyr Asp
 85 90 95

Val Leu Gly Asp Asp Ser Lys Asp Gly Ala Val Glu Glu Asp Asp Glu
 100 105 110

His Ala Thr Thr Glu Thr Ile Met Thr Met Ala Thr Glu Pro Asp Pro
 115 120 125

Ile Val Gln Val Asp Arg Lys Pro Lys Cys Cys Phe Phe Ser Phe Ser
 130 135 140

Pro Lys Ile Gln Ala Asn Arg Ile Val Arg Ala Gln Leu Trp Val His
 145 150 155 160

Leu Arg Pro Ala Glu Glu Ala Thr Thr Val Phe Leu Gln Ile Ser Arg
 165 170 175

Leu Met Pro Val Lys Asp Gly Gly Arg His Arg Ile Arg Ser Leu Lys
 180 185 190

Ile Asp Val Asn Ala Gly Val Thr Ser Trp Gln Ser Ile Asp Val Lys
195 200 205

Gln Val Leu Thr Val Trp Leu Lys Gln Pro Glu Thr Asn Arg Gly Ile
210 215 220

Glu Ile Asn Ala Tyr Asp Ala Lys Gly Asn Asp Leu Ala Val Thr Ser
225 230 235 240

Thr Glu Thr Gly Glu Asp Gly Leu Leu Pro Phe Met Glu Val Lys Ile
245 250 255

Ser Glu Gly Pro Lys Arg Ile Arg Arg Asp Ser Gly Leu Asp Cys Asp
260 265 270

Glu Asn Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val Asp
275 280 285

Phe Glu Asp Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr Lys
290 295 300

Ala Asn Tyr Cys Ser Gly Glu Cys Asp Tyr Met Tyr Leu Gln Lys Tyr
305 310 315 320

Pro His Thr His Leu Val Asn Lys Ala Ser Pro Arg Gly Thr Ala Gly
325 330 335

Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr Phe
340 345 350

Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ser Met Val Val
355 360 365

Asp Arg Cys Gly Cys Ser
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<210> 21
<211> 4
<212> PRT
<213> artificial

<220>
<223> proteolytic cleavage site

<220>
<221> VARIANT
<222> (1) .. (4)

<223> Xaa is any amino acid

<400> 21

Arg Xaa Xaa Arg

1

<210> 22

<211> 4

<212> PRT

<213> artificial

<220>

<223> proteolytic processing site

<400> 22

Arg, Ser Arg Arg

1

<210> 23

<211> 4

<212> PRT

<213> artificial

<220>

<223> proteolytic processing site

<400> 23

Arg Ile Arg Arg

1

<210> 24

<211> 1393

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (54) .. (1274)

<400> 24

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Met
1

gtg ctc gcg gcc ccg ctg ctg ctg ggc ttc ctg ctc ctc gcc ctg gag 104
Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu Glu
5 10 15

ctg cgg ccc cgg ggg gag gcg gcc gag ggc ccc gcg gcg gcg gcg gcg 152
Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala Ala Ala
20 25 30

gcg gcg gcg gcg gcg gca gcg gcg ggg gtc ggg ggg gag cgc tcc agc 200
Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser Ser
35 40 45

cgg cca gcc ccg tcc gtg gcg ccc gag ccg gac ggc tgc ccc gtg tgc 248

Arg 50	Pro	Ala	Pro	Ser	Val 55	Ala	Pro	Glu	Pro	Asp 60	Gly	Cys	Pro	Val	Cys 65	
gtt	tgg	cgg	cag	cac	agc	cgc	gag	ctg	cgc	cta	gag	agc	atc	aag	tcg	296
Val	Trp	Arg	Gln	His	Ser	Arg	Glu	Leu	Arg	Leu	Glu	Ser	Ile	Lys	Ser	
				70					75					80		
cag	atc	ttg	agc	aaa	ctg	cgg	ctc	aag	gag	gcg	ccc	aac	atc	agc	cgc	344
Gln	Ile	Leu	Ser	Lys	Leu	Arg	Leu	Lys	Glu	Ala	Pro	Asn	Ile	Ser	Arg	
			85					90					95			
gag	gtg	gtg	aag	cag	ctg	ctg	ccc	aag	gcg	ccg	ccg	ctg	cag	cag	atc	392
Glu	Val	Val	Lys	Gln	Leu	Leu	Pro	Lys	Ala	Pro	Pro	Leu	Gln	Gln	Ile	
		100					105						110			
ctg	gac	cta	cac	gac	ttc	cag	ggc	gac	gcg	ctg	cag	ccc	gag	gac	ttc	440
Leu	Asp	Leu	His	Asp	Phe	Gln	Gly	Asp	Ala	Leu	Gln	Pro	Glu	Asp	Phe	
	115					120					125					
ctg	gag	gag	gac	gag	tac	cac	gcc	acc	acc	gag	acc	gtc	att	agc	atg	488
Leu	Glu	Glu	Asp	Glu	Tyr	His	Ala	Thr	Thr	Glu	Thr	Val	Ile	Ser	Met	
130					135						140				145	
gcc	cag	gag	acg	gac	cca	gca	gta	cag	aca	gat	ggc	agc	cct	ctc	tgc	536
Ala	Gln	Glu	Thr	Asp	Pro	Ala	Val	Gln	Thr	Asp	Gly	Ser	Pro	Leu	Cys	
				150					155					160		
tgc	cat	ttt	cac	ttc	agc	ccc	aag	gtg	atg	ttc	aca	aag	gta	ctg	aag	584
Cys	His	Phe	His	Phe	Ser	Pro	Lys	Val	Met	Phe	Thr	Lys	Val	Leu	Lys	
			165					170					175			
gcc	cag	ctg	tgg	gtg	tac	cta	cgg	cct	gta	ccc	cgc	cca	gcc	aca	gtc	632
Ala	Gln	Leu	Trp	Val	Tyr	Leu	Arg	Pro	Val	Pro	Arg	Pro	Ala	Thr	Val	
		180					185					190				
tac	ctg	cag	atc	ttg	cga	cta	aaa	ccc	cta	act	ggg	gaa	ggg	acc	gca	680
Tyr	Leu	Gln	Ile	Leu	Arg	Leu	Lys	Pro	Leu	Thr	Gly	Glu	Gly	Thr	Ala	
	195					200					205					
ggg	gga	ggg	ggc	gga	ggc	cgg	cgt	cac	atc	cgt	atc	cgc	tca	ctg	aag	728
Gly	Gly	Gly	Gly	Gly	Gly	Arg	Arg	His	Ile	Arg	Ile	Arg	Ser	Leu	Lys	
210					215					220					225	
att	gag	ctg	cac	tca	cgc	tca	ggc	cat	tgg	cag	agc	atc	gac	ttc	aag	776
Ile	Glu	Leu	His	Ser	Arg	Ser	Gly	His	Trp	Gln	Ser	Ile	Asp	Phe	Lys	
				230					235					240		
caa	gtg	cta	cac	agc	tgg	ttc	cgc	cag	cca	cag	agc	aac	tgg	ggc	atc	824
Gln	Val	Leu	His	Ser	Trp	Phe	Arg	Gln	Pro	Gln	Ser	Asn	Trp	Gly	Ile	
			245					250					255			
gag	atc	aac	gcc	ttt	gat	ccc	agt	ggc	aca	gac	ctg	gct	gtc	acc	tcc	872
Glu	Ile	Asn	Ala	Phe	Asp	Pro	Ser	Gly	Thr	Asp	Leu	Ala	Val	Thr	Ser	
		260					265					270				
ctg	ggg	ccg	gga	gcc	gag	ggg	ctg	cat	cca	ttc	atg	gag	ctt	cga	gtc	920
Leu	Gly	Pro	Gly	Ala	Glu	Gly	Leu	His	Pro	Phe	Met	Glu	Leu	Arg	Val	
	275					280					285					
cta	gag	aac	aca	aaa	cgt	tcc	cgg	cgg	aac	ctg	ggg	ctg	gac	tgc	gac	968
Leu	Glu	Asn	Thr	Lys	Arg	Ser	Arg	Arg	Asn	Leu	Gly	Leu	Asp	Cys	Asp	

1000 900 800 700 600 500 400 300 200 100 0

290 295 300 305

gag cac tca agc gag tcc cgc tgc tgc cga tat ccc ctc aca gtg gac 1016
 Glu His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val Asp
 310 315 320

ttt gag gct ttc ggc tgg gac tgg atc atc gca cct aag cgc tac aag 1064
 Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr Lys
 325 330 335

gcc aac tac tgc tcc ggc cag tgc gag tac atg ttc atg caa aaa tat 1112
 Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys Tyr
 340 345 350

ccg cat acc cat ttg gtg cag cag gcc aat cca aga ggc tct gct ggg 1160
 Pro His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala Gly
 355 360 365

ccc tgt tgt acc ccc acc aag atg tcc cca atc aac atg ctc tac ttc 1208
 Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr Phe
 370 375 380 385

aat gac aag cag cag att atc tac ggc aag atc cct ggc atg gtg gtg 1256
 Asn Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val Val
 390 395 400

gat cgc tgt ggc tgc tct taagtgggtc actacaagct gctggagcaa 1304
 Asp Arg Cys Gly Cys Ser
 405

agacttggtg ggtgggtaac ttaacctctt cacagaggat aaaaaatgct tgtgagtatg 1364

acagaaggga ataaacaggc ttaaagggt 1393

<210> 25
 <211> 407
 <212> PRT
 <213> Homo sapiens

<400> 25

Met Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu
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Glu Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala
 20 25 30

Ala Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser
 35 40 45

Ser Arg Pro Ala Pro Ser Val Ala Pro Glu Pro Asp Gly Cys Pro Val
 50 55 60

Cys Val Trp Arg Gln His Ser Arg Glu Leu Arg Leu Glu Ser Ile Lys
 65 70 75 80

Ser Gln Ile Leu Ser Lys Leu Arg Leu Lys Glu Ala Pro Asn Ile Ser
85 90 95

Arg Glu Val Val Lys Gln Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln
100 105 110

Ile Leu Asp Leu His Asp Phe Gln Gly Asp Ala Leu Gln Pro Glu Asp
115 120 125

Phe Leu Glu Glu Asp Glu Tyr His Ala Thr Thr Glu Thr Val Ile Ser
130 135 140

Met Ala Gln Glu Thr Asp Pro Ala Val Gln Thr Asp Gly Ser Pro Leu
145 150 155 160

Cys Cys His Phe His Phe Ser Pro Lys Val Met Phe Thr Lys Val Leu
165 170 175

Lys Ala Gln Leu Trp Val Tyr Leu Arg Pro Val Pro Arg Pro Ala Thr
180 185 190

Val Tyr Leu Gln Ile Leu Arg Leu Lys Pro Leu Thr Gly Glu Gly Thr
195 200 205

Ala Gly Gly Gly Gly Gly Gly Arg Arg His Ile Arg Ile Arg Ser Leu
210 215 220

Lys Ile Glu Leu His Ser Arg Ser Gly His Trp Gln Ser Ile Asp Phe
225 230 235 240

Lys Gln Val Leu His Ser Trp Phe Arg Gln Pro Gln Ser Asn Trp Gly
245 250 255

Ile Glu Ile Asn Ala Phe Asp Pro Ser Gly Thr Asp Leu Ala Val Thr
260 265 270

Ser Leu Gly Pro Gly Ala Glu Gly Leu His Pro Phe Met Glu Leu Arg
275 280 285

Val Leu Glu Asn Thr Lys Arg Ser Arg Arg Asn Leu Gly Leu Asp Cys
290 295 300

Asp Glu His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
305 310 315 320

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
 325 330 335

Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys
 340 345 350

Tyr Pro His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala
 355 360 365

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
 370 375 380

Phe Asn Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val
 385 390 395 400

Val Asp Arg Cys Gly Cys Ser
 405

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 <211> 476
 <212> DNA
 <213> Salmon

<220>
 <221> CDS
 <222> (3)..(473)
 <223> Salmon-1

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 Gln Pro Glu Thr Asn Trp Gly Ile Glu Ile Asn Ala Phe Asp Ser
 1 5 10 15

aag gga aat gat ctg gcc gtt acc tca gca gaa gcg gga gaa gga ctg 95
 Lys Gly Asn Asp Leu Ala Val Thr Ser Ala Glu Ala Gly Glu Gly Leu
 20 25 30

caa ccc ttc atg gag gtg acg att tca gag ggc ccg aag cgc tcc agg 143
 Gln Pro Phe Met Glu Val Thr Ile Ser Glu Gly Pro Lys Arg Ser Arg
 35 40 45

aga gac tcg ggc ctg gac tgt gac gag aac tcc ccc gag tcc cgc tgt 191
 Arg Asp Ser Gly Leu Asp Cys Asp Glu Asn Ser Pro Glu Ser Arg Cys
 50 55 60

tgc cgc tac ccc ctc acg gta gac ttt gaa gac ttt ggc tgg gac tgg 239
 Cys Arg Tyr Pro Leu Thr Val Asp Phe Glu Asp Phe Gly Trp Asp Trp
 65 70 75

att att gcc ccc aag cgc tac aag gcc aac tac tgc tct ggt gag tgt 287
 Ile Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys
 80 85 90 95

gag tac atg cac ctg cag aag tac ccc cac acc cac ctg gtg aac aag 335

Glu Tyr Met His Leu Gln Lys Tyr Pro His Thr His Leu Val Asn Lys
 100 105 110

gct aac cct cgc ggc acc gca ggg ccc tgc tgc acc ccc acc aag atg 383
 Ala Asn Pro Arg Gly Thr Ala Gly Pro Cys Cys Thr Pro Thr Lys Met
 115 120 125

tcc ccc atc aac atg ctc tac ttc aac cgc aaa gag cag atc atc tac 431
 Ser Pro Ile Asn Met Leu Tyr Phe Asn Arg Lys Glu Gln Ile Ile Tyr
 130 135 140

ggc aag atc ccc tcc atg gtg gtg gac cgt tgc gga tgc tcg tga 476
 Gly Lys Ile Pro Ser Met Val Val Asp Arg Cys Gly Cys Ser
 145 150 155

<210> 27
 <211> 157
 <212> PRT
 <213> Salmon

<400> 27

Gln Pro Glu Thr Asn Trp Gly Ile Glu Ile Asn Ala Phe Asp Ser Lys
 1 5 10 15

Gly Asn Asp Leu Ala Val Thr Ser Ala Glu Ala Gly Glu Gly Leu Gln
 20 25 30

Pro Phe Met Glu Val Thr Ile Ser Glu Gly Pro Lys Arg Ser Arg Arg
 35 40 45

Asp Ser Gly Leu Asp Cys Asp Glu Asn Ser Pro Glu Ser Arg Cys Cys
 50 55 60

Arg Tyr Pro Leu Thr Val Asp Phe Glu Asp Phe Gly Trp Asp Trp Ile
 65 70 75 80

Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu
 85 90 95

Tyr Met His Leu Gln Lys Tyr Pro His Thr His Leu Val Asn Lys Ala
 100 105 110

Asn Pro Arg Gly Thr Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser
 115 120 125

Pro Ile Asn Met Leu Tyr Phe Asn Arg Lys Glu Gln Ile Ile Tyr Gly
 130 135 140

Lys Ile Pro Ser Met Val Val Asp Arg Cys Gly Cys Ser
 145 150 155

<210> 28
 <211> 412
 <212> DNA
 <213> Salmon

<220>
 <221> CDS
 <222> (2)..(409)
 <223> Salmon-2

<400> 28
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 Val Thr Ser Thr Glu Ala Gly Glu Gly Leu Gln Pro Phe Met Glu Val
 1 5 10 15

aag att tcg gag ggc ccg aag cgc tcc agg aga gat tcg ggc ctg gac 97
 Lys Ile Ser Glu Gly Pro Lys Arg Ser Arg Arg Asp Ser Gly Leu Asp
 20 25 30

tgt gat gag aac tcc ccc gag tcc cgc tgc tgc cgg tac ccc ctc acg 145
 Cys Asp Glu Asn Ser Pro Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr
 35 40 45

gtg gac ttt gaa gac ttt ggc tgg gac tgg att att gcc ccc aag cgc 193
 Val Asp Phe Glu Asp Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg
 50 55 60

tac aag gcc aac tac tgc tct ggt gag tgc gag tac atg cac ctg cag 241
 Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Tyr Met His Leu Gln
 65 70 75 80

aag tac ccc cac acc cac ctg gtg aac aag gct aac cct cgc ggc acc 289
 Lys Tyr Pro His Thr His Leu Val Asn Lys Ala Asn Pro Arg Gly Thr
 85 90 95

gcg ggg ccc tgc tgc acc ccc acc aag atg tcc ccc atc aac atg ctc 337
 Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu
 100 105 110

tac ttc aac cgc aaa gag cag atc atc tac ggc aag atc ccc tcc atg 385
 Tyr Phe Asn Arg Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ser Met
 115 120 125

gtg gtg gac cgc tgc ggc tgc tcg tga 412
 Val Val Asp Arg Cys Gly Cys Ser
 130 135

<210> 29
 <211> 136
 <212> PRT
 <213> Salmon

<400> 29
 Val Thr Ser Thr Glu Ala Gly Glu Gly Leu Gln Pro Phe Met Glu Val
 1 5 10 15

Lys Ile Ser Glu Gly Pro Lys Arg Ser Arg Arg Asp Ser Gly Leu Asp
 20 25 30

Cys Asp Glu Asn Ser Pro Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr
 35 40 45

Val Asp Phe Glu Asp Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg
 50 55 60

Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Tyr Met His Leu Gln
 65 70 75 80

Lys Tyr Pro His Thr His Leu Val Asn Lys Ala Asn Pro Arg Gly Thr
 85 90 95

Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu
 100 105 110

Tyr Phe Asn Arg Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ser Met
 115 120 125

Val Val Asp Arg Cys Gly Cys Ser
 130 135